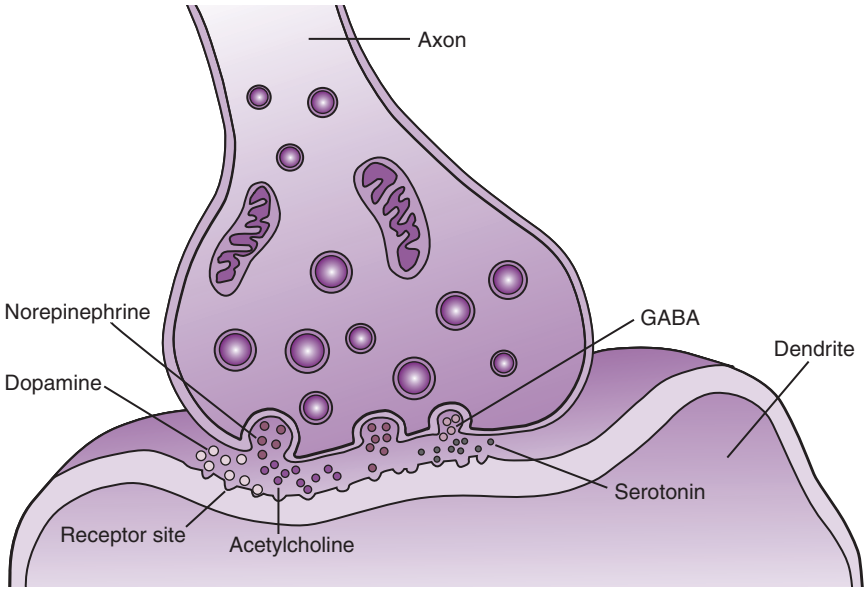

FIGURE 13-2: Nerve synapse. The gap between the axon and the dendrite of a nerve is called the synapse. Neurotransmitters such as gamma-aminobutyric acid (GABA), serotonin, dopamine, norepinephrine, and acetylcholine help transmit the electrical impulse from the axon to the dendrite. The neurotransmitters fit into receptors on the dendrites. Some psychotropic drugs act by inhibiting the work of the neurotransmitters, thereby slowing the electrical impulses; others act by stimulating neurotransmitters, thereby promoting electrical impulses.

MEDICATIONS TO TREAT BEHAVIORAL, EMOTIONAL, AND MOOD DISORDERS

Behavioral and emotional disorders are becoming more common in the United States. Behavioral and emotional disorders is a broad term used to include a wide variety of mental health diagnoses in which the individual may have difficulty initiating and maintaining relationships with peers and others. This includes diagnoses such as ODD (oppositional-defiant disorder), OCD (obsessive-compulsive disorder), anxiety disorders, schizophrenia, and autism. Mood disorders are typically characterized by the elevation or depression of one's mood. For example, a person with bipolar disorder experiences periods of mania, very elevated emotions, to very low emotions such as depression. Several categories of drugs, including antidepressants, mood stabilizer drugs, and antipsychotics, can be used to help patients with behavioral, emotional, and mood disorders.

Central Nervous System Stimulants

CNS stimulants are used to treat ADD, ADHD, obesity, and sleep disorders such as narcolepsy. Attention deficit disorder (ADD) and attention deficit–hyperactivity disorder (ADHD) are common in both children and adults. In the past, these were considered behavioral disorders, but today there is much debate as to whether they should be included in this category. These disorders stem from the ineffectiveness of the impulse control center of the frontal cortex of the brain.

It may seem counterintuitive to give a distracted, unfocused, overactive patient a stimulant, but CNS stimulants such as amphetamine/dextroamphetamine (Adderall), pemoline (Cylert), and methylphenidate (Ritalin) have the opposite effect in these patients in that they calm them and increase their ability to focus. An alternate way to view this disorder is to understand that the patient is being bombarded by a multitude of stimuli and is unable to focus on any one of them. The CNS stimulants help these patients to focus on only a few of the stimuli and not be distracted by the others and therefore allow patients to become more successful in their daily activities. People who do not have ADD or ADHD but who take the medication anyway find that it acts as a CNS stimulant.

Sometimes an amphetamine, a type of CNS stimulant, such as phentermine (Zantryl), is prescribed for obesity. Usually, it is given 30 to 60 minutes before meals to increase metabolism,